

ABSTRACT

High-power electric machines must be intensively cooled. At the same time, it is necessary to ensure a high level of immunity to impurities. For this purpose, the rotor and stator sheet packs (41, 42, 61, 62) are embodied in two parts, thereby making it possible to carry out a two-sided ventilation, said parts being maintained separately in the middle by a ring (5, 7). Said ring (5,7) is provided with ribs (51, 52, 71, 72) in such a way that radial flow channels are formed between partial sheet stacks and ensure corresponding flow rate. In another embodiment, monoblock sheet stacks are provided with cooling channel extensions on either side of the sheet stack. Said cooling extensions alternate on the axial cooling channels in the peripheral direction and transport heated coolant outwards in respectively opposite directions.